

REPORT TO THE BOARD OF FISHERIES,
STATUS OF THE ALLOCATION OF ENHANCED FISH,
SOUTHEAST REGION



By

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INTRODUCTION

This report summarizes the development and implementation of the Southeastern Alaska Area Enhanced Salmon Allocation Management Plan, and the current status of the allocation of enhanced fish among the three commercial gear groups in the Southeast Region: gillnet, seine, and troll. At the present time the allocation does not conform to the recommended guidelines. Two factors outside of regulatory control, marine survival and price paid to fishers, have exerted substantial influence on the distribution of benefits from the enhancement program. Several proposals under consideration by the Alaska Board of Fisheries could affect the balance of the allocation of enhanced fish among the gear groups.

BRIEF HISTORY OF THE ALLOCATION PLAN

In early 1991 the Board of Fisheries asked the commercial fishers of Southeast Alaska, through their two Regional Aquaculture Associations, to develop a plan for the equitable sharing of the catch of enhanced salmon. The Southeast Allocation Task Force (SATF) was formed to draft a plan. The SATF consisted of voting members from the Northern Southeast Regional Aquaculture Association (NSRAA) and the Southern Southeast Regional Aquaculture Association (SSRAA), with equal representation from each association and from the three commercial gear groups. Non-voting members included ADF&G staff, regional aquaculture association staff, and a representative from Douglas Island Pink and Chum, Inc., a non-association hatchery corporation. The allocation plan was developed through a lengthy public process, and in 1994 the Board of Fisheries approved the plan, which is now regulation 5 AAC 33.364. The Joint Northern Southeast and Southern Southeast Regional Planning Team (Joint RPT) reviews the status of the allocation of enhanced fish each spring and recommends production or harvest changes if necessary.

DESCRIPTION OF THE ALLOCATION PLAN

The Southeastern Alaska Area Enhanced Salmon Allocation Management Plan delineates percentage ranges of the commercial harvest *catch value* that should be realized by each commercial gear group. Recommended ranges are: seine, 44% - 49%; hand and power troll, 27% - 32%; and drift gillnet, 24% - 29%. Catch value is computed from 1) the number of enhanced fish harvested by each commercial gear group, based primarily on marking or tagging programs, reported by hatchery operators, and 2) average price per fish, by gear type, computed by the Commercial Fisheries Entry Commission (CFEC). Allocation percentages are evaluated as five-year moving averages. If a gear group is out of its allocation range for three consecutive five-year averages, some adjustment in production or harvest may be implemented to bring a gear group back into its range.

Finding of the Alaska Board of Fisheries Finding #94-02-FB is associated with the allocation regulation². It provides a more detailed explanation of the plan development process, and also the Report of the

² Finding #94-02-FB is in "Alaska Statutes and Regulations for Private NonProfit Salmon Hatcheries", 1996 edition, compiled by ADF&G Commercial Fisheries Management and Development Division, Private Nonprofit Hatchery Program, P.O. Box 25526, Juneau, AK 99802-5526

Southeast Alaska Allocation Task Force for Enhanced Salmon, which contains flexible guidelines for plan implementation.

MECHANISMS FOR CORRECTION

The tools for making adjustments to the distribution of the harvest, in order to achieve allocation percentage targets, are (1) special harvest area management adjustments, (2) new enhanced salmon production, and (3) modification of enhancement project production, including remote releases (Guideline #13 in Finding #94-02-FB). Special harvest area management adjustments can be used for short-term corrections. New production or modification of existing projects are remedies for the long term, and can be instigated by facilities requesting changes or by the Joint RPT making recommendations, through the commissioner of ADF&G, for changes in production.

THE STATUS OF ALLOCATION

The current status of the allocation of enhanced fish is shown in Figures 1 through 3. The most recent calculations include preliminary 1998 numbers and *very* preliminary 1999 numbers³. The five-year average seine harvest value has been above its target range since 1996, and rose slightly in 1999 even though the preliminary 1999 percentage shows a decrease of 13 percent from the previous year (Figure 1). Conversely, for the troll harvest, the five-year average dropped further below its target range while the preliminary 1999 percentage rose by seven percent (Figure 2). The five-year moving averages did not respond to the 1999 trends in the seine and troll percentages because the percentages for 1994, the latest year the allocation was on par, dropped out of the five-year calculations, and the moving averages responded accordingly. The gillnet harvest value for 1999 moved solidly back into its target range, along with the five-year moving average (Figure 3). In summary, the preliminary 1999 data indicate a trend toward balancing the allocation, and if these trends continue the five-year moving averages for the seine and troll harvests will follow.

FACTORS AFFECTING THE ALLOCATION OF ENHANCED FISH

It became apparent with the preliminary 1997 numbers that an imbalance in the allocation had developed. Early in 1998, the Joint RPT conducted an in-depth analysis of the factors that led to the imbalance in order to recommend the most effective changes. Department staff constructed a series of graphs showing trends in harvest, price per pound, marine survival, and hatchery releases for the species most important to the troll fleet (chinook and coho salmon) and to the seine fleet (chum salmon). These graphs have been updated each year. The most recent graphs (Figures 4 through 9) contain final data through 1997 and

³ CFEC will finalize 1998 numbers in March 2000, and 1999 numbers in March 2001.

preliminary data from 1998 and 1999⁴. Trendlines on the graphs are polynomials based on three data points.

Coho

Troll harvest, price, and marine survival have fluctuated around average values since the late 1980s to early 1990s for coho salmon (Figures 4 and 5). No clear, long-term trends are apparent. The 1999 preliminary statistic for price, \$1.14/pound, is equal to the average price for 1989 – 1999. Releases have shown a gradual increase, but the 1999 release of 14.7 million fish is not far above the 10-year average of 12.4 million fish.

Chinook

Troll harvest, releases, and marine survivals have fluctuated around average values during the past 8 to 12 years (Figures 6 and 7). However, price has declined by more than 50% since 1987, from \$3.01/pound to \$1.33/pound.

Chum

The seine harvest of chum salmon increased nearly 10-fold from 1991 to 1999 (Figure 8). This increase has more than compensated for a 40% decline in price over the same period, resulting in a high economic return to the seine fleet. A 33% increase in releases of enhanced chum salmon, greatly compounded by a 5.5-fold increase in marine survival, have resulted in high abundance (Figure 9). Moreover, the efficiency of seine gear has enabled the fleet to take full advantage of the increased abundance.

ACTIONS TAKEN BY THE REGIONAL PLANNING TEAM

It has become apparent during Joint RPT debate that the two most influential factors affecting allocation, marine survival and price per pound – mainly a reflection of world market conditions, are factors outside the control of the associations, the Department, and the Board of Fisheries. The effect of these factors in the years since the adoption of the allocation plan cannot be significantly impacted by any reasonable action of the production facilities or harvest managers. No member of the Joint RPT has suggested that the present allocation imbalance was caused by poor planning or negligence of the production facilities to take into account the board's allocation guidelines. The allocation plan and associated findings of the board do not require the board to make changes in access, or the Joint RPT to recommend changes in production, when an imbalance occurs.

⁴ Preliminary and final data have not differed substantially in past years. The 1999 preliminary data have been compiled earlier than preliminary data in previous years. While we believe the trends are 'real', the magnitude of the changes from 1998 may vary in subsequent updates.

The Joint RPT has, from the outset, taken their assignment of ‘allocation plan oversight’ seriously. Recent Joint RPT meetings have been a forum to discuss hatchery production changes, and possible modifications of the harvest of enhanced fish to address the allocation imbalance⁵. The Joint RPT believes the intent of the allocation plan has always been to try and increase harvest of the group below its allocation using measures that do not to penalize the gear group that is above its target range. Because the allocation is relational, a percentage increase in troll value would mean a corresponding decrease in the other gear groups.

In April 1998 the Joint RPT recommended to the commissioner that hatcheries continue to increase chinook and coho production, where possible. Overall increases in chinook and coho releases during the late 1990s have been a positive step, as well as proposed changes in harvest management to provide more troll access to chinook and coho. If future marine survivals and exvessel prices do not adversely override these actions, the value of the troll harvest will increase.

The inherent risk of adjusting production to correct an imbalance is the lag time from egg take to harvest, especially for chinook and chum salmon. A decision to modify production numbers occurs four years before the majority of a brood year of fish returns for chums and five years prior for chinook. In the worst case scenario, a decision to *increase* production results in little or no increased harvest value, if survivals and prices decline⁶. A decision to *decrease* production could result in a magnified drop in harvest value, if survivals and prices decline. In the case of chum salmon, biologists and hatchery corporation staff believe the present marine survival, which has averaged 4.7% since the 1993 harvest, will return to the long term average of 1.5% seen during the 1980s and early 1990s, a decrease of 66%.

The Joint RPT has, so far, declined to make specific recommendations to the commissioner on hatchery operating plans, recognizing that hatchery operators must consider many factors when making production decisions.

The Joint RPT drafted and submitted two proposals to the Board of Fisheries for consideration during the 1999/2000 cycle that would increase the opportunity for trollers to harvest enhanced chinook and coho salmon. The Joint RPT also discussed other proposals before the board, related to the production and harvest of enhanced fish in Southeast, looking specifically at the potential impact they would have on allocation. The industry representatives on the Joint RPT compiled their findings, comments, and recommendations and submitted them to the board.

⁵ The role of the Joint RPT in making recommendations relative to allocation poses a unique situation for the three ADF&G representatives on the team. ADF&G staff provide technical input and participate in team discussions, but only the six industry representatives on the Joint RPT have voted on proposals or recommendations submitted to the Board of Fisheries.

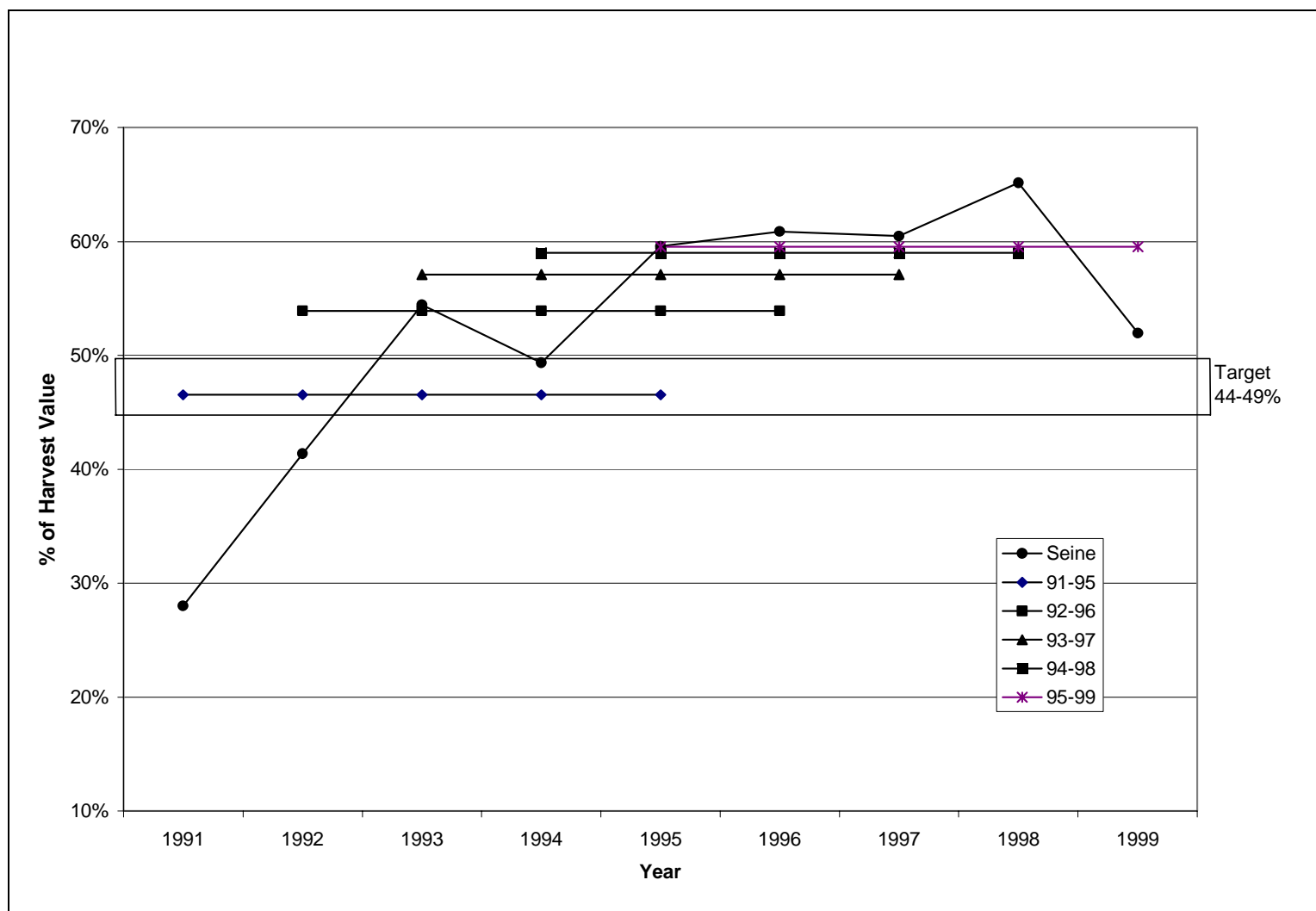


Figure 1. Seine harvest of enhanced salmon, as a percent of enhanced harvest value.

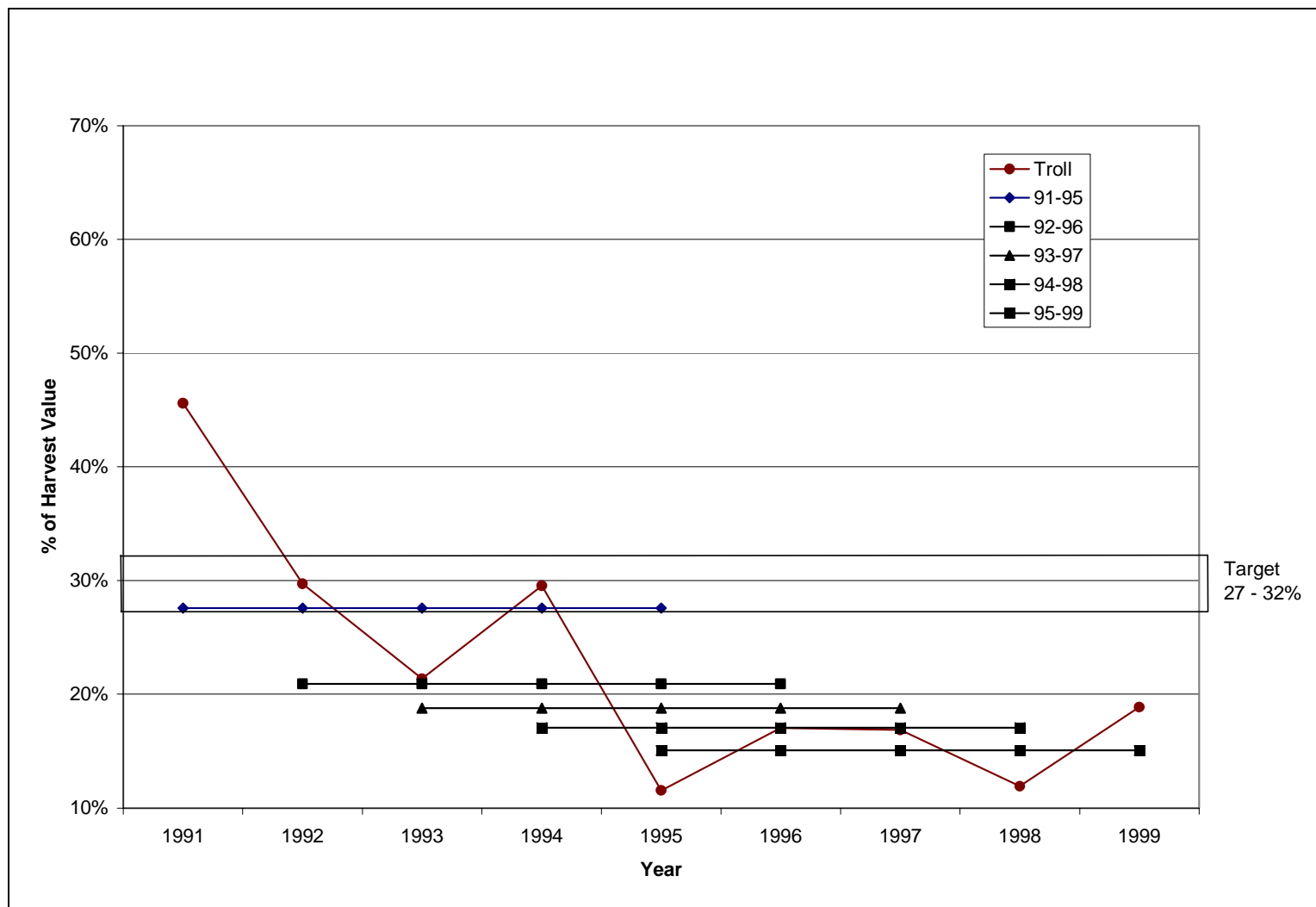


Figure 2. Troll harvest of enhanced salmon, as a percent of enhanced harvest value.

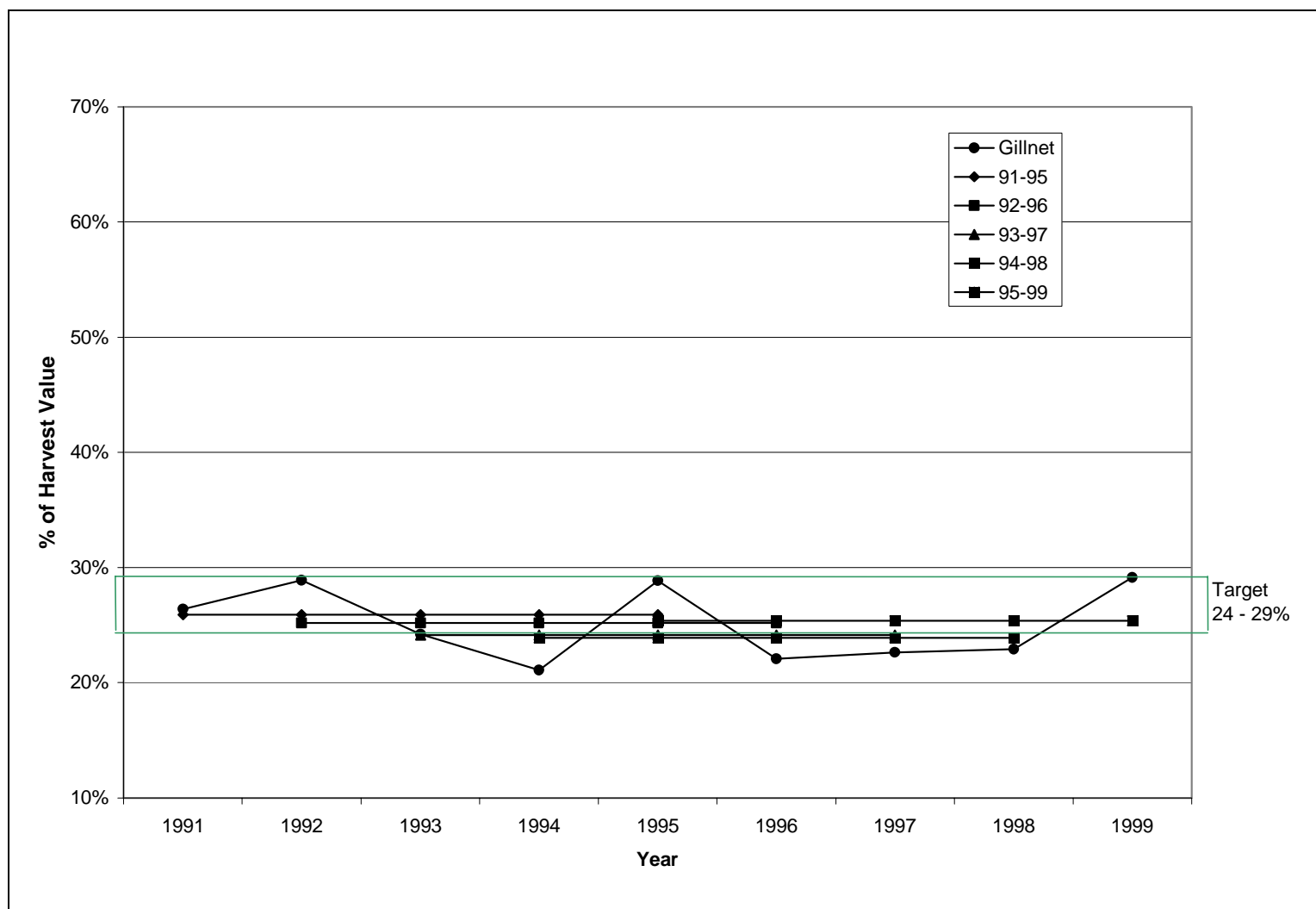


Figure 3. Gillnet harvest of enhanced salmon, as a percent of enhanced harvest value.

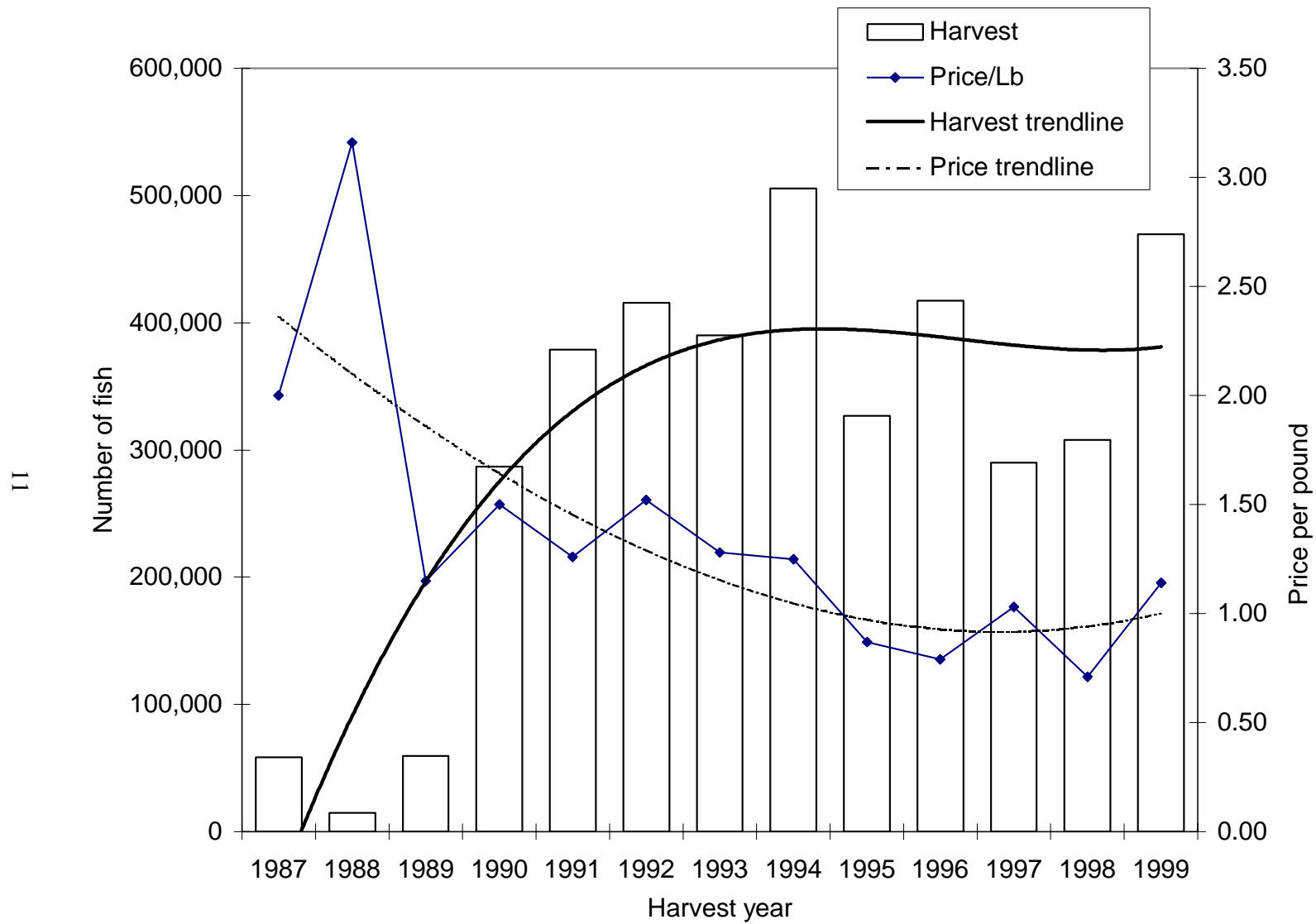


Figure 4. Troll harvest of enhanced coho salmon and overall price per pound.

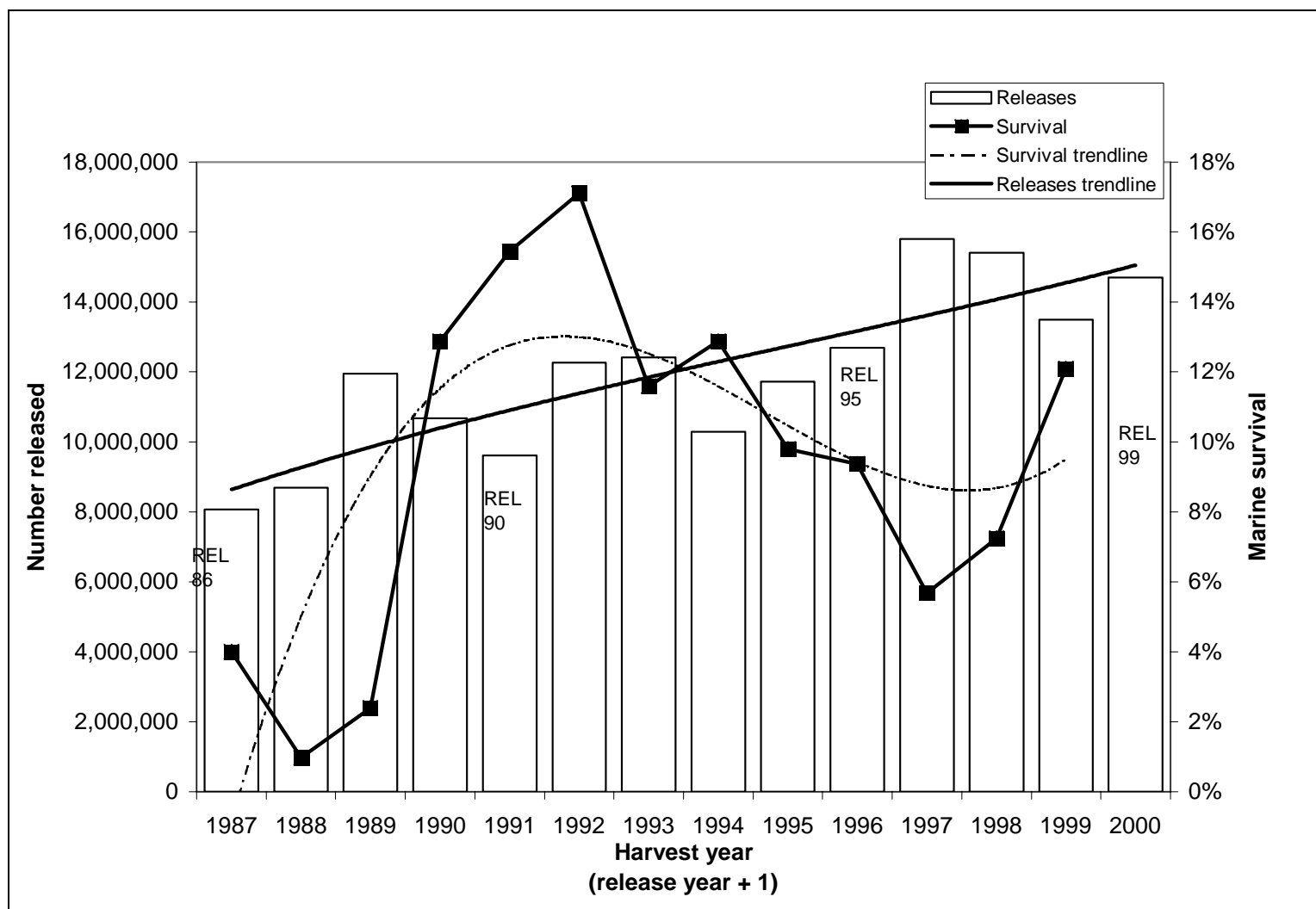


Figure 5. Enhanced coho salmon marine survival and hatchery releases.

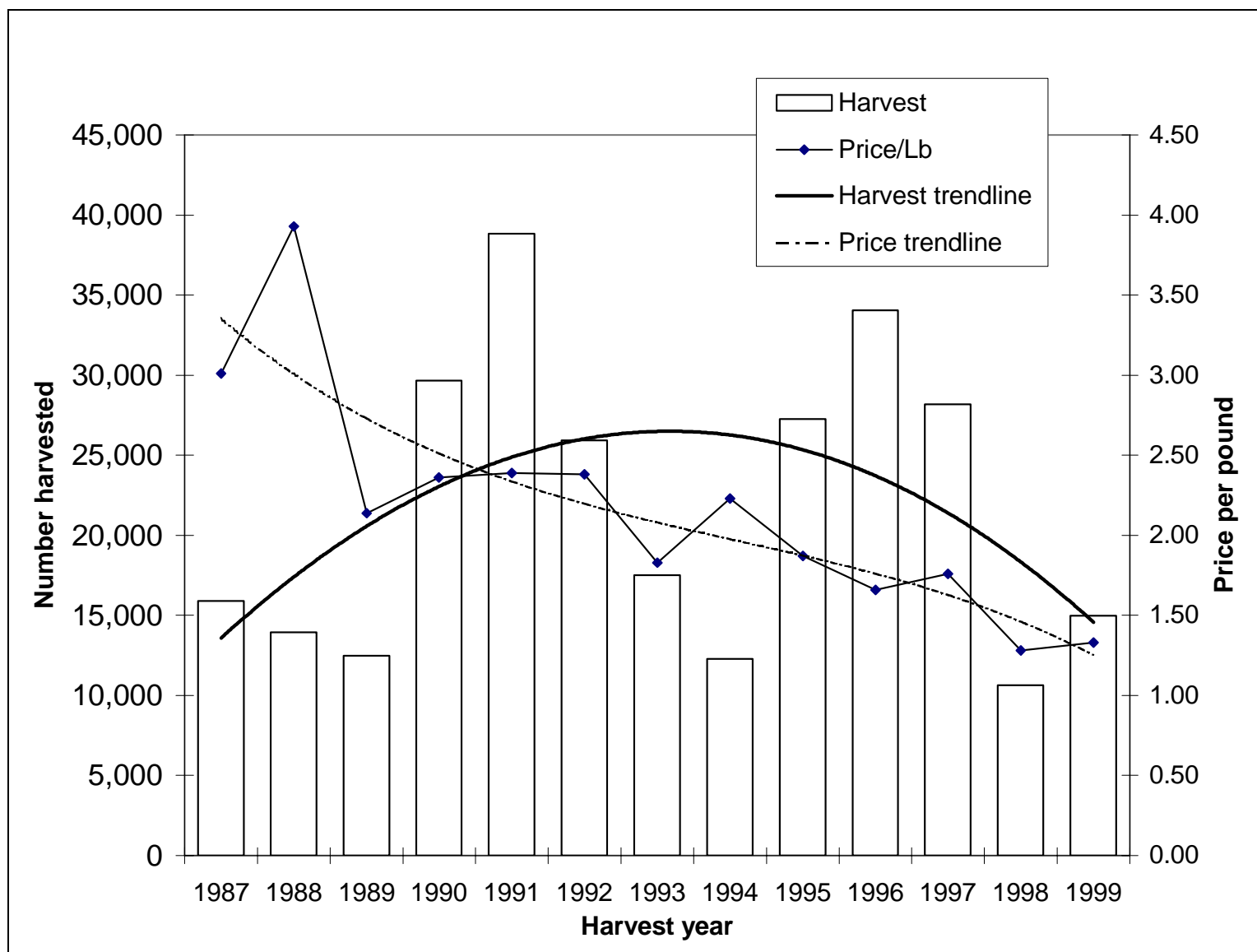


Figure 6. Troll harvest of enhanced chinook salmon and overall price per pound.

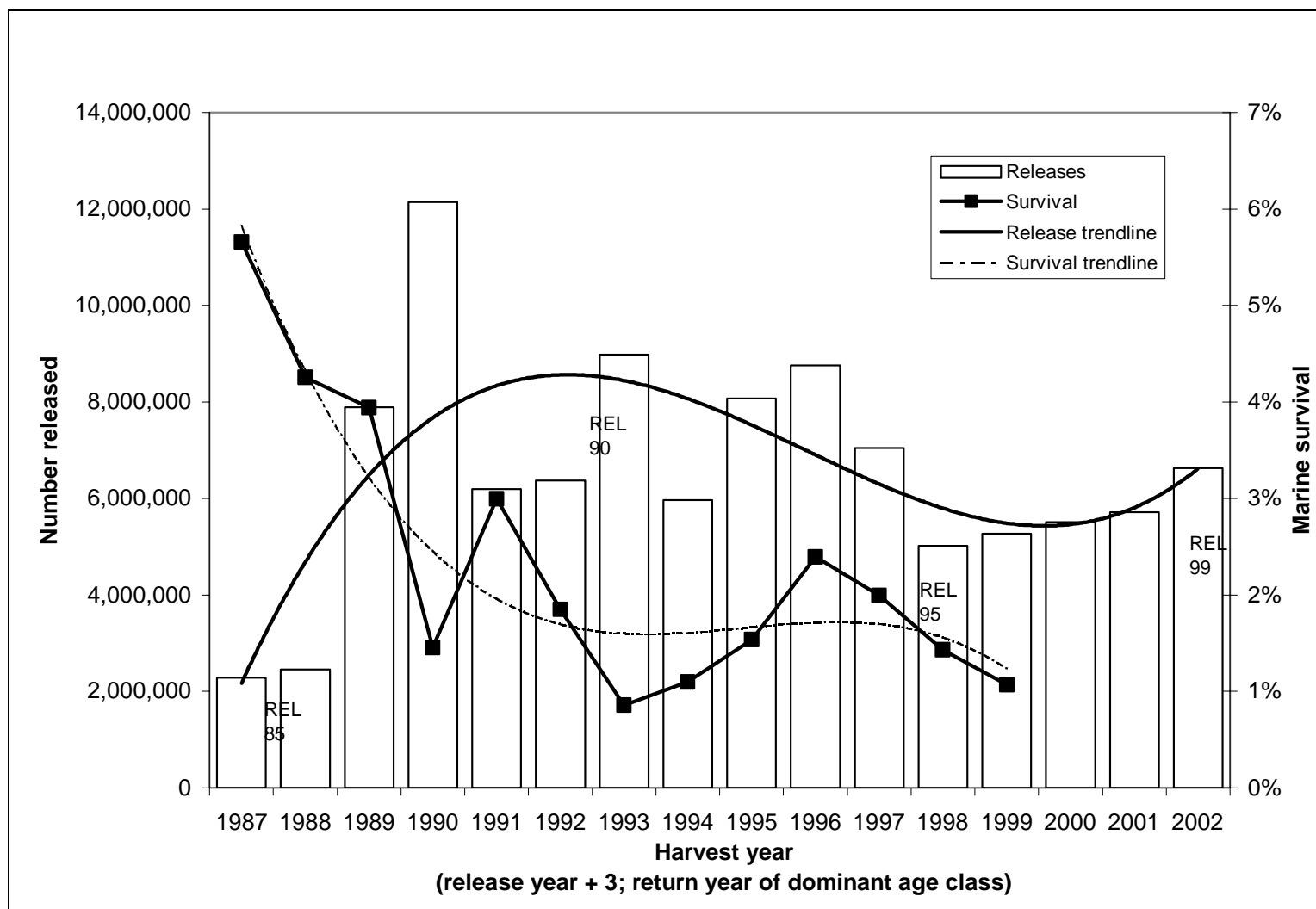


Figure 7. Enhanced chinook salmon marine survival and hatchery releases

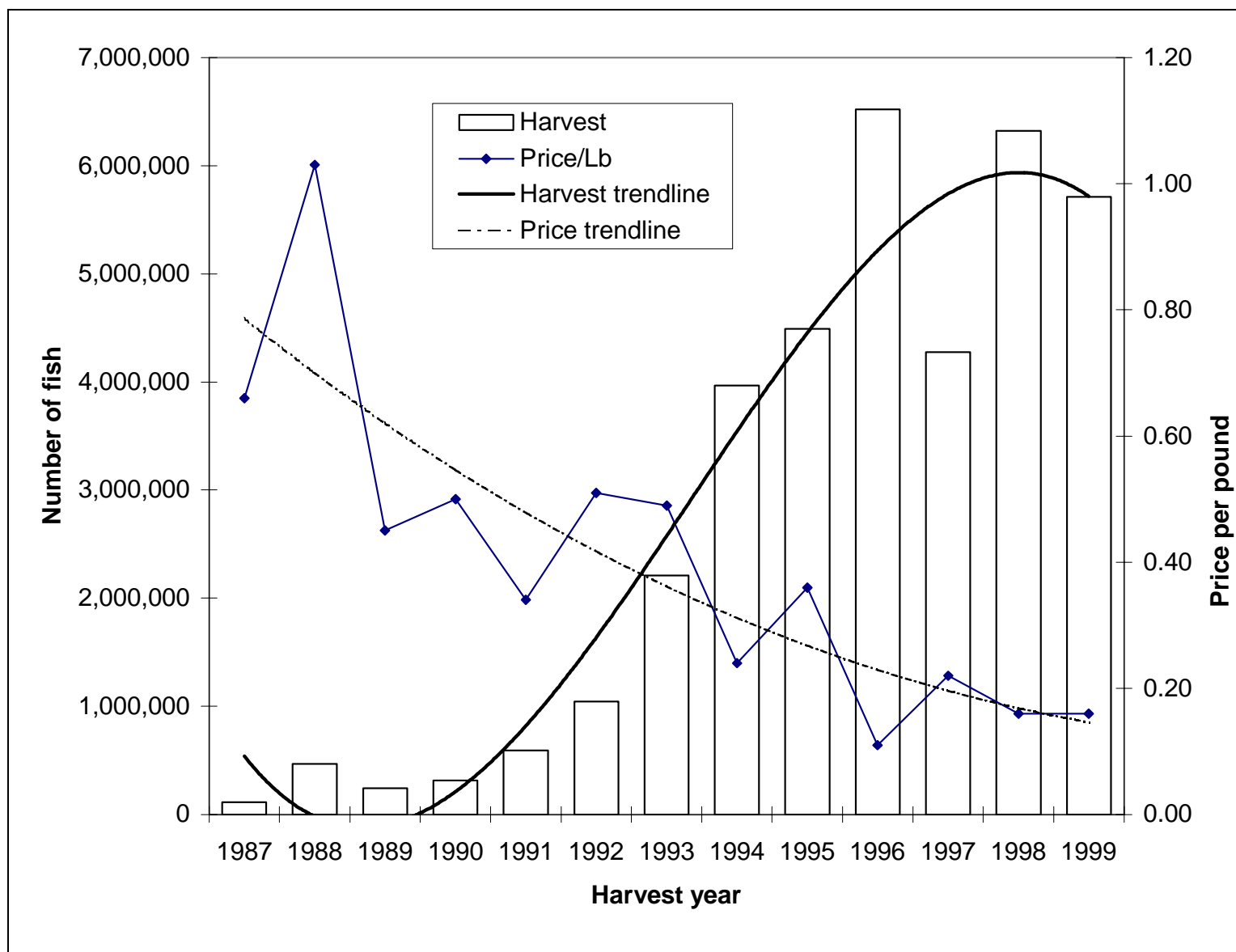


Figure 8. Seine harvest of enhanced chum salmon and overall price per pound

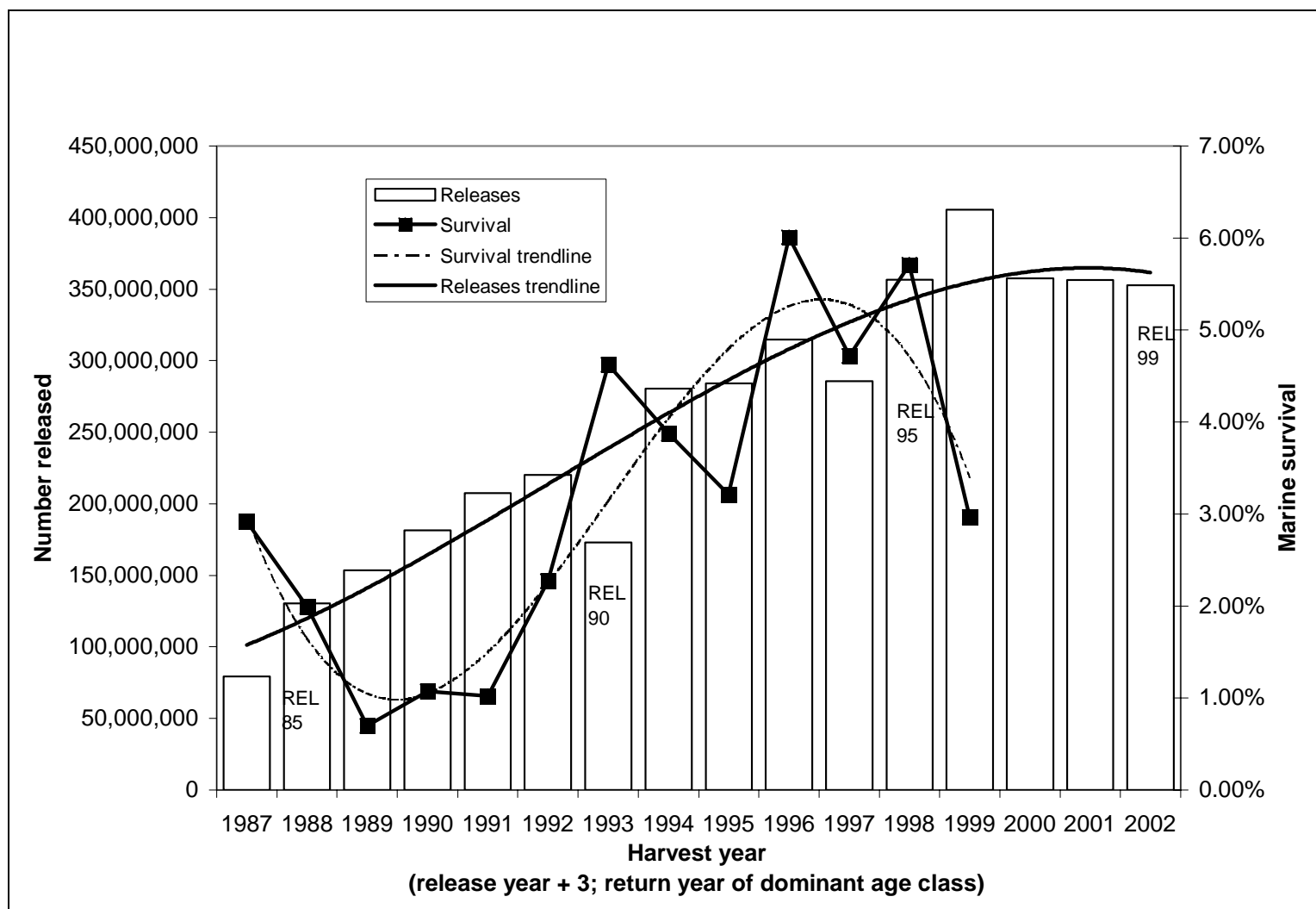


Figure 9. Enhanced chum salmon marine survival and hatchery releases.

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